

REMARKS

Claims 14 to 19, 21 and 24 to 29 are pending.

Applicants respectfully request reconsideration of the present application in view of this response.

With respect to paragraph three (3) of the Office Action, claims 14 to 18, 21 and 24 to 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Siemens, British Patent 900,774 in view of Yajima, United States Patent No. 4,336,215 and Fitterer, United States Patent No. 2,094,102.

Claim 14 is to a thermoelectric component, and includes a first element and a second element, where the first element and the second element are in contact with each other in an area of at least one contact point, and where at least in one vicinity of the contact point, at least one of the first element and the second element includes a ceramic material. While the rejections may not be agreed with, to facilitate matters, claim 14 has been rewritten such that at least in one vicinity of the contact point, the ceramic material includes a filler of one of FeCr and FeCrNi. The recitation of chromium carbide has been removed.

Claim 29 is a method, and includes the steps of providing a thermoelectric component, the thermoelectric component including a first element and a second element, the first element and the second element arranged in contact with each other in an area of at least one contact point, at least in one vicinity of the contact point, at least one of the first element and the second element including a ceramic material and arranging the thermoelectric component in one of a thermocouple configured to one of measure temperature and a Peltier element as one of a thermoelectric heating element and a cooling element. While the rejections may not be agreed with, to facilitate matters, claim 29 has been rewritten such that the ceramic material includes a filler of one of FeCr and FeCrNi. The recitation of chromium carbide has been removed.

As regards the obviousness rejections, to reject a claim as obvious under 35 U.S.C. § 103, the prior art must disclose or suggest each claim feature and it must also provide a motivation or suggestion for combining the features in the manner contemplated by the claim. (See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990)). Thus, the “problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the

references in order to solve the problem”, Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 679 (Fed. Cir. 1998). It is believed and respectfully submitted that the prior art simply does not address the problems met by the subject matter of any of the rejected claims.

The Office Action admits that the Siemens reference does not describe or even suggest the presence of any filler materials placed in a ceramic material, where the filler material is one of FeCr and FeCrNi. (See Office Action page 3.) Similarly, Siemens does not provide a method pertaining to these filler materials.

The secondary Yajima reference does not cure the critical defects of the Siemens reference, since it only refers to mixing ceramic materials with semi-inorganic block copolymers, for example oxides such as Al₂O₃, BeO, MgO, ZrO₂ or SiO₂, carbides, nitrides, borides, and silicides or ternary or higher compounds of these. (Col. 6, lines 44 to 52.) The Yajima reference refers to additives for adding to ceramic substrates, such as MgO, NiO for Al₂O₃, CaO and TiO₂ for ZrO₂, Al₂O₃ and Y₂O₃ for Si₃N₄, B, Si and C for SiC, Ni and WC for TiC, and ZrO₂ and CrB₂ for ZrB₂. (Col. 5, lines 11 to 15.) The Yajima reference simply does not disclose or suggest the presence of FeCr and FeCrNi, as provided for in the context of the claims.

The third level Fitterer reference does not cure the critical defects of the Siemens and Yajima references. The Fitterer reference refers to thermocouples in which at least one element contains essentially certain saturated compounds that are stable in air at elevated temperatures. The Fitterer reference refers to carbides of elements of the fourth group of the periodic system of the iron group (iron, cobalt, nickel), of chromium, of molybdenum and of tungsten possess such capabilities. The Fitterer reference, however, simply does not disclose (or suggest) the presence of FeCr and FeCrNi, as provided for in the context of the claims.

As the combination of Siemens, Yajima, and Fitterer does not disclose or suggest the features of claims 14 and 29, as presented, it is respectfully requested that the rejections of claims 14 and 29, as presented, be withdrawn.

Claims 15 to 18, 21, and 24 to 28 depend from claim 14 and are therefore allowable for at least the same reasons as claim 24.

With respect to paragraph four (4), claims 14 to 19, 21 and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bachman, United States Patent No. 2,981,775 in view of the Yajima reference and the Fitterer reference.

The Office Action admits that the Bachman reference does not disclose a filler material being one of FeCr and FeCrNi. Moreover, the Bachman reference does not describe or even suggest the presence of any filler materials placed in a ceramic material, in which the filler material is one of FeCr and FeCrNi. Similarly, Bachman does not provide a method pertaining to these filler materials.

The secondary Yajima reference does not cure the critical defects of the Bachman reference, since it only refers to mixing ceramic materials with semi-inorganic block copolymers, for example oxides such as Al₂O₃, BeO, MgO, ZrO₂ or SiO₂, carbides, nitrides, borides and silicides.

The Fitterer reference does not cure the critical defects of the Bachman and Yajima reference. The Fitterer reference merely refers to carbides of elements of the fourth group of the periodic system of the iron group (iron, cobalt, nickel), of chromium, of molybdenum and of tungsten possess such capabilities.

The Bachman, Yajima and Fitterer references simply do not disclose or suggest the presence of FeCr and FeCrNi, as provided for in the context of the claims. It is therefore respectfully requested that the rejections as to claims 14 and 29 be withdrawn.

Claims 15 to 19 and 21 depend from claim 14, and are therefore allowable for the same reasons as claim 14.

Accordingly, claims 14 to 19, 21 and 24 to 29 are allowable.

Appl. No. 10/069,680

Att. Docket No. 10191/2217

Reply To Final Office Action of 07/22/2004

CONCLUSION

In view of the above, it is believed that the rejections have been obviated, and it is respectfully submitted that claims 14 to 19, 21 and 24 to 29 are allowable. It is therefore respectfully requested that the rejections be reconsidered and withdrawn, and that the present application issue as early as possible.

Respectfully submitted,

Dated: 11/18/2004

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